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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/768,613	01/30/2004	Dwight M. Smith	27435.002	6773
7590 Constance Gall Rhebergen Bracewell & Patterson LLP P.O. Box 61389 Houston, TX 77208-1389				
			EXAMINER ZHENG, LOIS L	
			ART UNIT 1793	PAPER NUMBER
			MAIL DATE 06/24/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/768,613

**Applicant(s)**

SMITH, DWIGHT M.

**Examiner**

LOIS ZHENG

**Art Unit**

1793

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 May 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10, 14-20 and 35-50 is/are pending in the application.
- 4a) Of the above claim(s) 1-10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 14-20 and 35-50 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF-08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 23 May 2008 has been entered.

### ***Status of Claims***

2. Claim 14 is amended in view of applicant's amendment filed 23 May 2008. Claims 11-13 and 21-33 are canceled in view of applicant's amendment. Claim 34 is marked "Not entered". Claims 1-10 remain withdrawn from consideration. New claims 35-50 are added in view of applicant's amendment. Therefore, claims 14-20 and 35-50 are currently under examination.

### ***Status of Previous Rejections***

3. All previous rejections are withdrawn in view of applicant's claim amendments and persuasive arguments and declaration under 37 CFR 1.132 filed 23 May 2008.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 35-36 and 39-40 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Hudson US 5,106,435 (Hudson).

Hudson teaches a process of forming a phosphate conversion coating layer on a steel surface (col. 2 lines 33-47, col. 3 lines 13-20). Hudson further teaches that the coating solution is an aqueous solution comprising phosphate compounds as follows (col. 3 lines 24-40):

ing. The solution may be made up using a soluble phosphate compound. Preferred soluble phosphates for use in the aqueous solution include phosphoric acid ( $H_3PO_4$ ), ammonium phosphate monobasic ( $NH_4H_2PO_4$ ), and ammonium phosphate dibasic ( $(NH_4)_2HPO_4$ ). Solutions of ammonium phosphate dibasic offer advantages in handling over acidic solutions in that solution pH values (about 7.5) are close to neutrality. Accordingly, use of ammonium phosphate dibasic is especially preferred. Soluble phosphates other than those mentioned as preferred, for example sodium phosphates and potassium phosphates, also may be used in the method of the invention. In preparing the solution, various soluble phosphates may be used alone or in combination, provided that the total phosphate ion concentration in solution is sufficient for purposes of the invention as described below.

Regarding claims 35-36, Hudson teaches the claimed mixture of monobasic and dibasic ammonium phosphate. In addition, the phosphate solution as taught by Hudson

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is free of alcohol because Hudson does not teach the addition/presence of alcohol in the coating solution. Furthermore, the examiner considers water in the coating solution of Hudson as the claimed target fluid since phosphate solution is an aqueous solution which implies the addition of phosphate solution to water to prepare the final working solution. Alternatively, it would have been obvious to one of ordinary skill in the art to have prepared the coating solution of Hudson by diluting a concentrated phosphate solution with water in order to achieve desired coating concentration to form a phosphate coating film with desired level of corrosion protection.

Regarding claims 39-40, one of ordinary skill in the art would have recognized the inherent teaching of claimed potassium monobasic/dibasic phosphate from the teachings of potassium phosphate by Hudson. Alternatively, one of ordinary skill in the art would have found the claimed monobasic and dibasic potassium phosphates obvious in light of the teachings of potassium phosphate by Hudson since potassium phosphate as taught by Hudson includes the claimed monobasic and dibasic potassium phosphates.

7. Claims 14-16, 20, 35-37, 41-42 and 46-47 are rejected under 35 U.S.C. 102(b) being anticipated by Chumat et al. US 4,060,433(Chumat).

Chumat teaches a process of foam phosphating a metal surface for form a phosphate coating (abstract). The metal surface treated by the process of Chumat is a steel surface such as an ASTM D609-61 panel(col. 4 lines 19-29). Chumat also teaches that a concentrated phosphate containing solution can be diluted with an aqueous media and/or organic liquid carriers such as a hydrocarbon solvent to produce a

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desirable working solution having a pH of about 3.0 to about 5.5(col. 9 lines 26-34, col. 10 lines 1-33). Chumat further teaches that the phosphate in this invention denotes orthophosphate, monohydrogenphosphate and dihydrogenphosphate(col. 6 lines 21-27), preferably dibasic phosphate salts of ammonium or monovalent metals(col. 10 lines 14-16).

Regarding claims 14-15, 20, 35-36, 41 and 46, Chumat teaches the claimed hydrocarbon target fluid(i.e. lubricating fluid) and the claimed phosphorus containing solution comprising the claimed phosphate compounds. In addition, the coating solution of Chumat does not require the presence of alcohol as claimed.

Regarding claims 16, 37, 42 and 47, Chumat further teaches the presence of organic ammonium salts in the coating solution, wherein acetic acid can be used to form such organic ammonium salts(col. 11 lines 8-11), which implies the presence of claimed ammonium acetate.

8. Claims 17, 38, 43 and 48 are rejected under 35 U.S.C. 103(a) being unpatentable over Chumat.

The teachings of Chumat are discussed in paragraph 7 above.

Regarding claims 17, 38, 43 and 48, the upper limit of the pH(i.e. about 5.5) is very close to the lower limit of the claimed pH of about 6.0. It is well settled that a prima facie case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties. See MPEP 2144.05. Therefore, a prima facie case of obviousness exists. The selection of claimed pH range from the disclosed range of

Chunat would have been obvious to one skilled in the art since Chunat teaches the same utilities in its disclosed pH range.

9. Claims 18-19, 39-40, 44-45 and 49-50 are rejected under 35 U.S.C. 103(a) being unpatentable over Hudson.

The teachings of Chunat are discussed in paragraphs 7-8 above.

However, Hudson does not explicitly teach that the monovalent metal for phosphate compounds in its coating solution is the claimed potassium.

The teachings of Hudson are discussed in paragraph 6 above.

Regarding claims 18-19, 39-40, 44-45 and 49-50, since Hudson teaches potassium phosphates are also suitable phosphate compounds in a phosphate coating solution, just as suitable as monobasic and dibasic ammonium phosphate, one of ordinary skill in the art would have found it obvious to have incorporated potassium as taught by Hudson as the monovalent metal of the phosphate compound in the coating solution of Chunat with expected success.

### ***Response to Arguments***

10. Applicant's arguments with respect to claims 14-20 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LOIS ZHENG whose telephone number is (571)272-1248. The examiner can normally be reached on 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Roy King/  
Supervisory Patent Examiner, Art  
Unit 1793

LLZ  
6/18/08